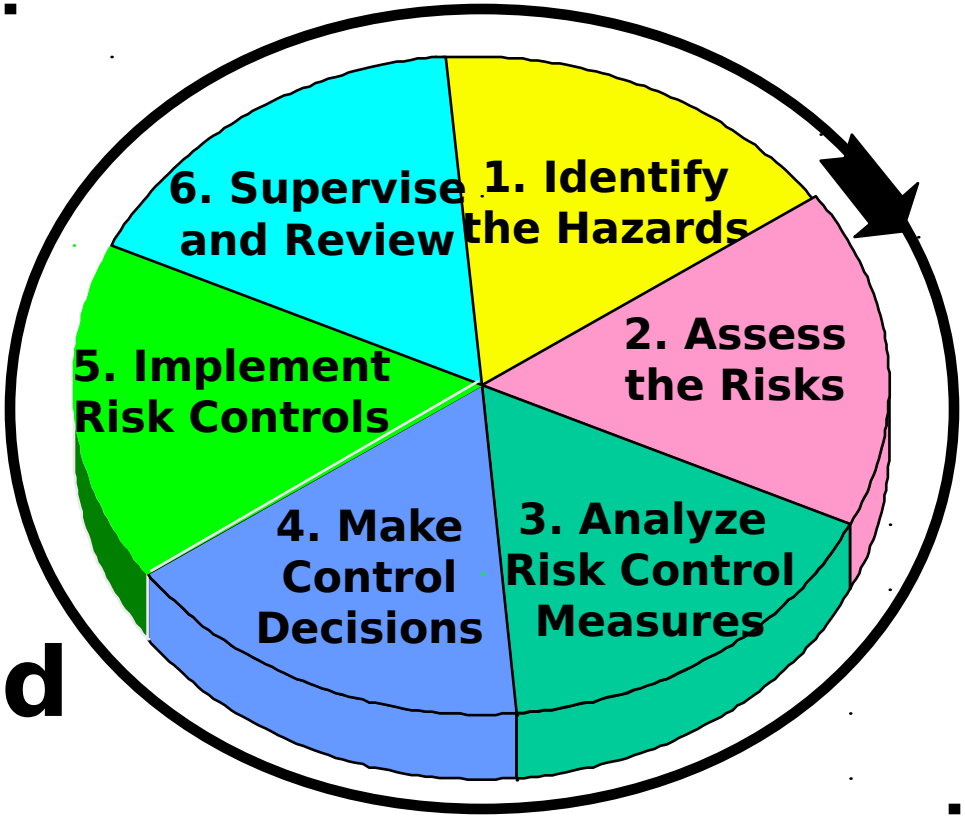
Operational Risk Management (ORM)

Level 3 Training for Employees

Training Provided by Your Supervisor


1. Identify the Hazards
2. Assess the Risks
3. Analyze Risk Control Measures
4. Make Control Decisions
5. Implement Risk Controls
6. Supervise and Review

USAF ORM VISION

Create an Air Force in which every leader, airman, and employee is trained and motivated to personally manage risk in all they do, on and off duty, with the objective of continuously widening the gap between what the Air Force can do in battle and what its adversaries can do, ensuring decisive victory in any future conflict at the least possible cost.

BOTTOM LINE: INTEGRATE ORM INTO EVERYTHING WE DO

USAF Operational Risk Management

"ORM provides airmen at every level with a sound mission-enabling tool to expand expeditionary capabilities."

General Jumper, CSAF

DEFINITIONS

"OPERATION"

MISSION, PROJECT, ACTIVITY

"COST/RISK"

SCHEDULE, PERSONNEL, $, COMFORT

"HAZARD THREAT PROBLEM"

NEGATIVE IMPACT ON THE "OPERATION"

WHAT ORM IS

- An enhancement of traditional USAF risk management procedures.
- A systematic approach to optimizing risk to support best mission outcomes.
- A specific six step process supported with tools and job aids.

WHAT ORM IS NOT

- ORM IS NOT AN EXCUSE FOR VIOLATING TECH DATA OR PUBLIC LAW

- ORM IS A TOOL FOR IDENTIFYING AND SUPPORTING CHANGES IN TECH DATA

4 KEY ORM PRINCIPLES

1. **Accept no unnecessary risks.**

2. **Make risk decisions at the appropriate level.**

3. **Accept risks when benefits outweigh costs.**

4. **Integrate ORM into operations and planning at**

all levels.

1. Accept No Unnecessary Risks

BUT…. COMMON SENSE TELLS US NOBODY TAKES "UNNECESSARY" RISKS? DON'T BELIEVE IT!

If all the hazards that could have been detected have not been detected then unnecessary risks are being accepted.

The single greatest advantage of ORM over traditional risk management is the consistent detection of 50%+ more hazards.

WHERE DOES THE BUCK STOP?

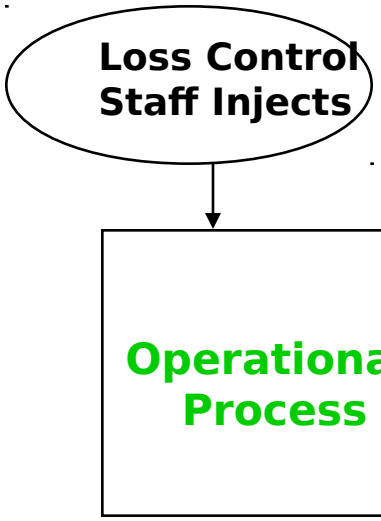
Factors to consider.

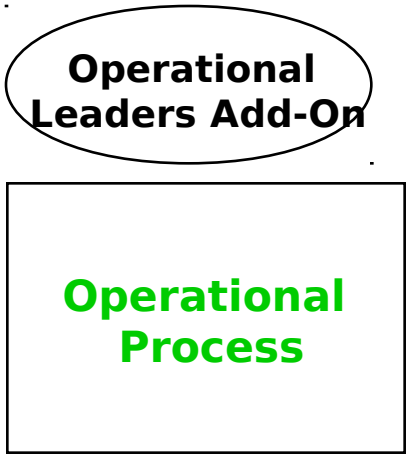
- Who will answer in the event of a mishap?
- Who is the senior person at the scene?
- Who possesses best insight into the full benefits and costs of a risk?
- Who has the resources to mitigate the risk?
- What level makes the most operational sense?
- What level makes these types of decisions in other activities?
- Who will have to make this decision in combat operations?

3. Accept Risks When Benefits Outweigh Costs.

BENEFITS
MUST
OUTWEIGH
COST

4. Integrate ORM Into Operations and Planning At All Levels.





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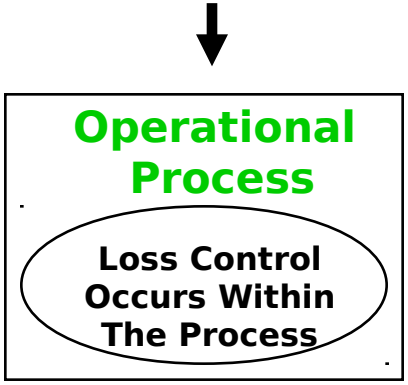
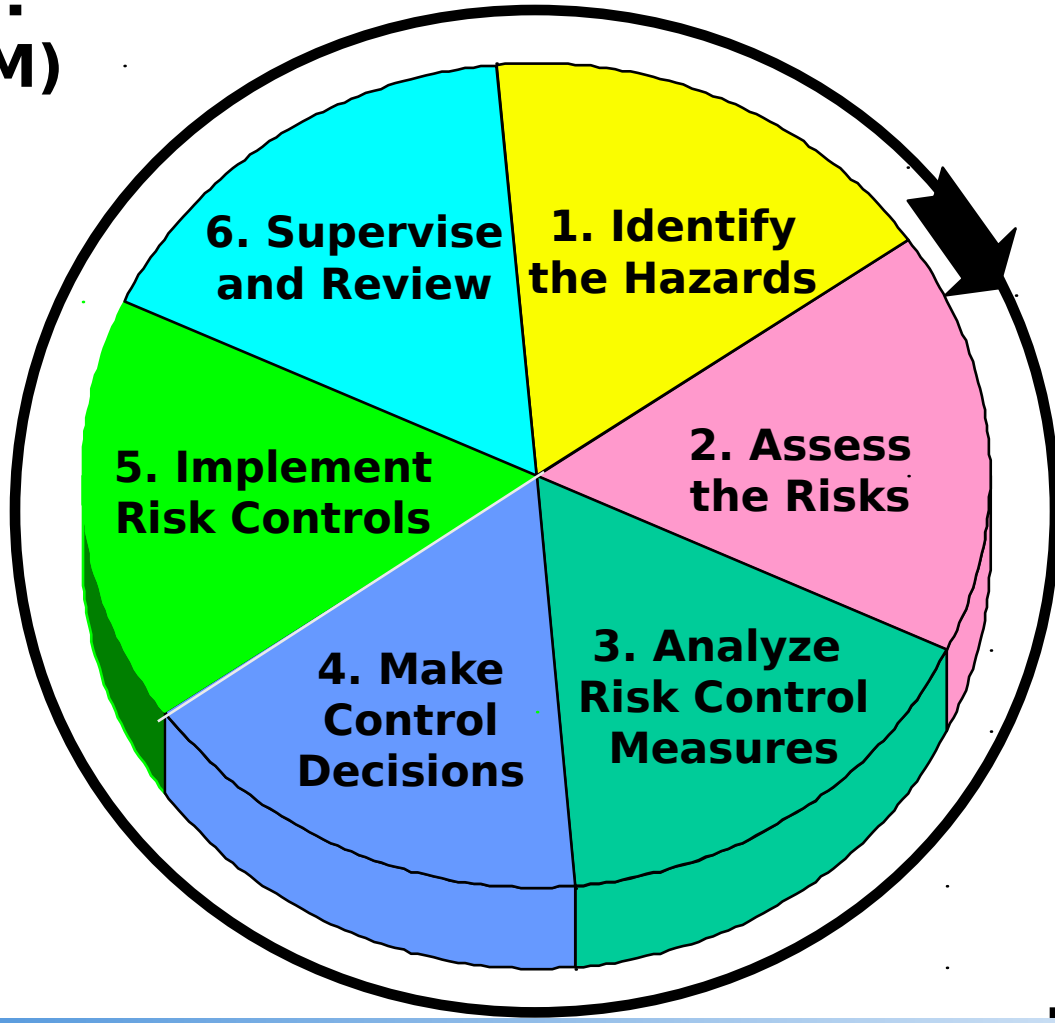


THE ORM 6-STEP PROCESS

- 1 ID THREAT (PROBLEM)
- 2 ASSESS RISK (ACCEPTABLE YES/NO)
- 3. DEVELOP PLAN
- 4. ASSIGN RESPONSIBILITY
- 5. IMPLEMENT PLAN
- 6. FOLLOW-UP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Step 1 Identify The Hazard

Identify the hazards to the mission by:

Analyzing Mission Requirements

Analyzing the Support Structure

Analyzing Capabilities

CAUSES for MISSION DEGRADATION

Use the 5M model to detect root (systemic) cause factors. (AFPAM 90-902, page 11)

Man root causes - Doesn't know - Training, Doesn't care - Motivation, Can't do - Selection.

Machine - Poor design, faulty maintenance, procedures.

Media - Weak facility design, lack of provisions for natural phenomena.

Mission - Poorly developed, weak understanding, incompatibilities.

Management - Inadequate procedures, standards and controls.

How much of this is a direct result of management?

IDENTIFICATION TOOLS

Five of the most frequently used Hazard Identification Tools

- OPERATIONS ANALYSIS
- PRELIMINARY HAZARD ANALYSIS
- WHAT IF TOOL
- CHANGE ANALYSIS
- SCENARIO PROCESS

THE OPERATIONS ANALYSIS

UNDERSTANDING THE FLOW OF EVENTS

OPERATIONS ANALYSIS

PURPOSE: To understand the flow of events.

APPLICATION: Used in almost all ORM situations.

METHOD: List the events in sequence.

RESOURCES: Planners & operators.

COMMENTS: Operations Analysis must cover all aspects of an operation.

OPERATIONS ANALYSIS

A VERY USEFUL TOOL TO:

Make an initial analysis of the risks in an operation.

Detect task overload and fatigue issues.

Spot interface issues.

Guide allocation of resources.

PRELIMINARY HAZARD ANALYSIS

A QUICK INITIAL ASSESSMENT OF HAZARDS

PRELIMINARY HAZARD ANALYSIS

- **PURPOSE:** To get a quick hazard survey of all of the phases of an operation.
- **APPLICATION:** Used in almost all applications except the most time critical.
- **METHOD:** Expand on the operation analysis.
- **RESOURCES:** Get input from operators.
- **COMMENTS:** Be sure to consider <u>all</u> aspects of the operation in the PHA.

PRELIMINARY HAZARD ANALYSIS

CHARACTERISTICS

Quick assessment of hazards

Uses scenario thinking, brainstorming, experts, accident data, regulations

Considers all phases of operations

Provides early ID of highest risk areas

Helps prioritize areas for further analysis

THE WHAT IF TOOL

ONE OF THE BEST

THE WHAT IF TOOL

PURPOSE: To capture input of employees in a brainstorming-like environment.

APPLICATION: Use in most ORM applications, especially time critical.

METHOD: Choose a segment of the operation and generate as many what if's as possible.

RESOURCES: Build off the operations analysis and areas of concern spotlighted by the PHA. Use employee input.

COMMENTS: Very effective tool.

CHANGE ANALYSIS

CRITICAL TOOL IN HAZARD DETECTION

CHANGE ANALYSIS

PURPOSE: To detect the hazard implications of both planned and unplanned change.

APPLICATION: When change occurs and there is any meaningful degree of risk.

METHOD: Compare the current situation to a previous situation.

RESOURCES: Previous or baseline situation.

COMMENTS: This is the great labor/time saver. Change analysis means focus only on the changes.

CHANGE ANALYSIS

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USE & MANAGEMENT

To assess the risk implications of planned change.

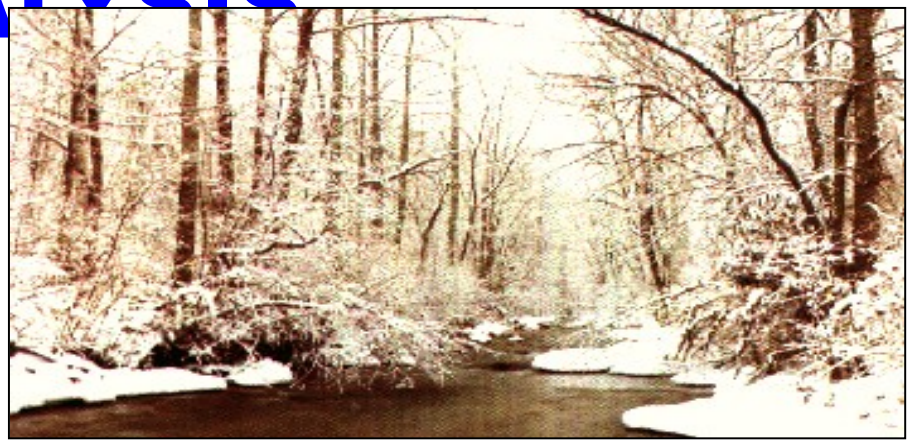
To detect the occurrence of unplanned change.

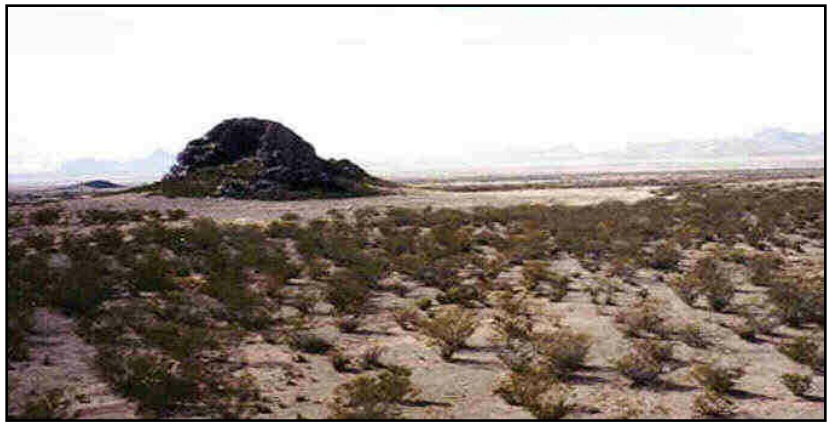
To control the character of change in high risk potential operations.

Mishap investigation.

CHANGE ANALYSIS

EXAMPLES OF CHANGE ANALYSIS





CHANGE ANALYSIS

EXAMPLES OF CHANGE ANALYSIS

- Assess impact of resource cuts (time, dollars, people, etc.).
- Assess impact of the environment (cold).
- Assess impact of changed equipment or supplies (F-16 for A-10).
- Assess impact of change on downstream activities (safer tests).
- Assess the impact of process &

SCENARIO PROCESS TOOL

A SYSTEMATIC WAY TO CAPTURE INTUITION AND EXPERIENCE

SCENARIO PROCESS TOOL

PURPOSE: Use imagination to visualize and capture unusual hazards.

APPLICATION: "See" the flow of events.

METHOD: Visualize the flow of events and identify hazards and problems as they are observed.

RESOURCES: The operations analysis provides "script" to visualize the process.

COMMENTS: This is the best tool for linking two or more hazards into a single scenario.

USES FOR SCENARIOS PROCESS

Hazard detection

Coordinate fragmented hazard data

Link hazards to possible results

Provide excellent training for process or program developers

SCENARIOS PROCESS TOOL

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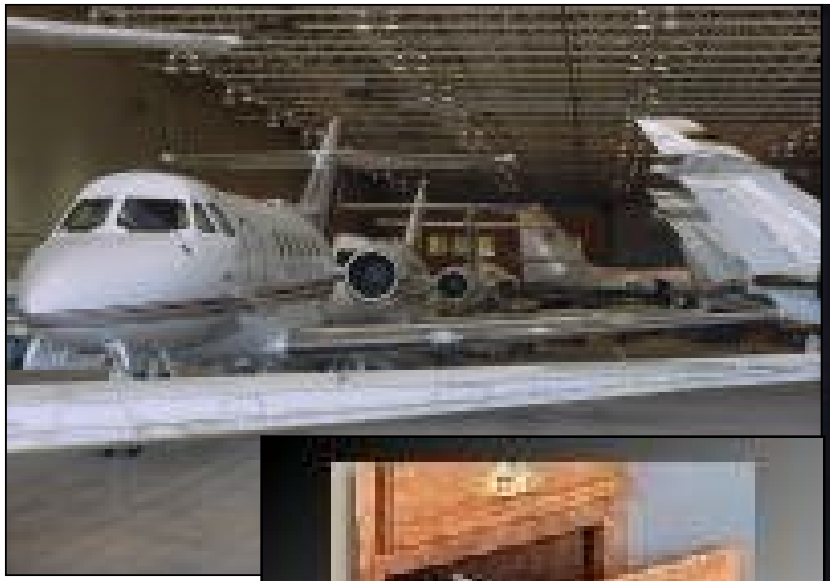
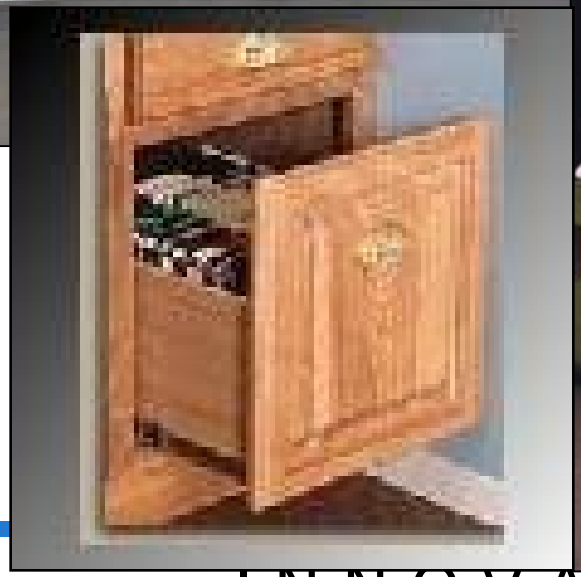
USES FOR SCENARIOS PROCESS





Step 2 - Assessing Risk

EVALUATE AND PRIORITIZE

Prioritize all “hazards or threats” to the mission so you can focus first on those most damaging to the mission.

Consider probability and severity to determine impact on priority.

Step 2 - Assessing Risk

Probably

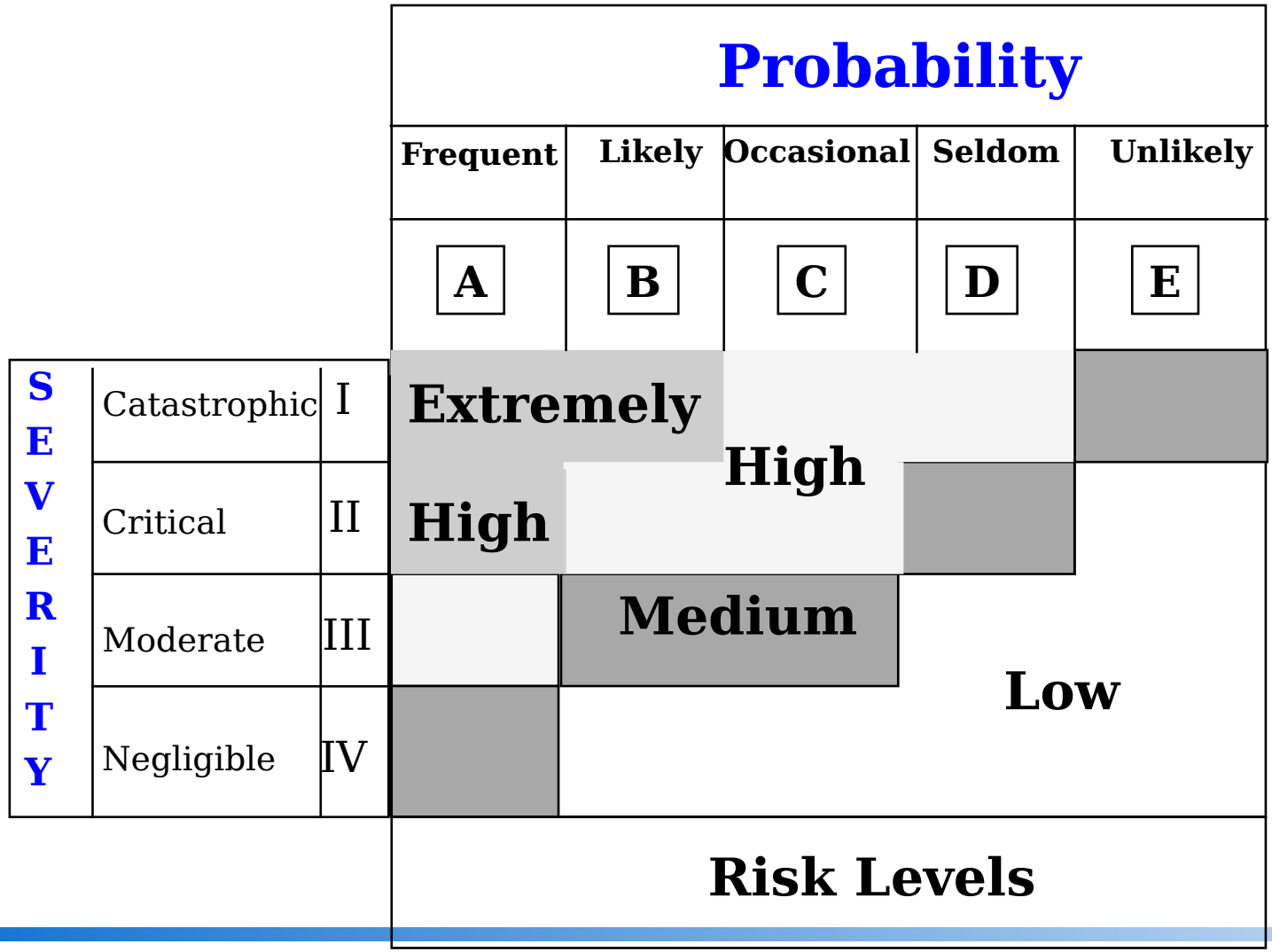
- Use experience data when possible (history).
- Involve employee knowledge and experience.
- Realize that probability involves some uncertainty.

Step 2 - Assessing Risk

Severity

- What impact on mission?
- What impact on people?
- What impact on things (materiel, facilities, environment)?

THE RISK ASSESSMENT MATRIX



THE *"ENHANCED"* RISK ASSESSMENT MATRIX

See AFPAM 90-902, page 89

Assignment of Numbers to Rank Risks More Quantitatively

			Probability				
			Frequent	Likely	Occasional	Seldom	Unlikely
			A	B	C	D	E
SEVERITY	Catastrophic	I	1	2	6		8
	Critical	II	3	4	7		11
	Moderate	III	5	9	15	10	
	Negligible	IV	14	13	16	17	18
			19	20	Risk Levels		

Step 2 - Assessing Risk

Complete Assessment

BUILD A PRIORITY LIST

TO TURN HAZARDS INTO ACTION TARGETS

DEVELOP PLANS

Develop plans based on a worst-first.

Plans must be cost effective and mission supportive.

Plans must not conflict with other mission activities.

Step 3 - Develop Plans

Develop Plans

Consider the "Standard Order of Precedence" for developing plans.

- **Plan or Design for Minimum**
- **Incorporate Safety Devices**
- **Provide Warning Devices**
- **Develop Procedures & Training**

Remember, "people" are the weakest link.

Step 3 - Develop Plans

Develop Plans

Consider

Select most mission supportive plans.

Be aware some plans are incompatible.

Be aware some plans reinforce one another.

Evaluate full costs versus full benefits.

When mission supportive - choose redundant plans.

Pinpoint plans when possible

Step-4
Assign Responsibility

Step 4 is about LEADERSHIP

The right person, at the right time, with the right support based upon:

Who has the “big picture” and the ability to control the costs and benefits.

Step-4
Assign Responsibility

Consider

- What are the operational realities?
- Who will take the heat if it goes bad?
- Who has the best grasp of the risk and the opportunity issues?
- Who would make the decision in combat?
- Who can commit the risk control resources?

Step 5 – Implement Plans

Step 5 is about LEADERSHIP

Make implementation clear

Establish Accountability

Provide support

Step 5 – Implement Plans

MAKE IMPLEMENTATION CLEAR

Factors to consider:

- Fully involve operational personnel.
- Frame the control within the organizational culture.
- Provide specific task-oriented guidance.
- Test it on a small sample of the target audience.
- Coordinate as necessary.

Step 5 – Implement Plans

ESTABLISH ACCOUNTABILITY

Factors to consider:

- Use the power of command and leadership.
- Create meaningful, positive incentives.
- Assure accountability is integrated through the chain of command.

Step 5 – Implement Plans

PROVIDE SUPPORT

Factors to consider:

- **Provide complete packages (clear, policy, job aids, decision tools, models, databases, training, motivation).**
- **Provide sustained feedback on results.**

Step 6 - Follow-Up

Step 6 is about LEADERSHIP

Measure mission effectiveness and direct indicators of risk.

Measure on a real time status.

Be proactive, <u>not</u> reactive.

Step 6 - Follow-Up

Supervise

Assure plans are effective and in place

Maintain implementation schedules.

Assure needed changes are detected.

Correct ineffective plans.

Step 6 - Follow-Up

Consider

- Are implementation schedules maintained?
- Are fixes effective and in place?
- Are all cost areas being monitored?
- Are costs within budgeted amounts?
- Are cost trends favorable?
- Are needed changes detected.

Step 6 - Follow-Up

Feedback

Provide feedback during the operation.

Cross-tell successes and failures to other organizations.

Provide feedback to leaders and airmen/employees during the operation.

Input lessons learned in established databases.